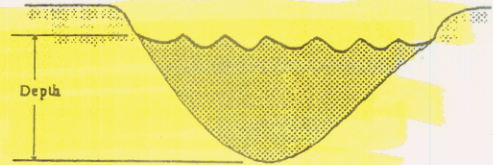


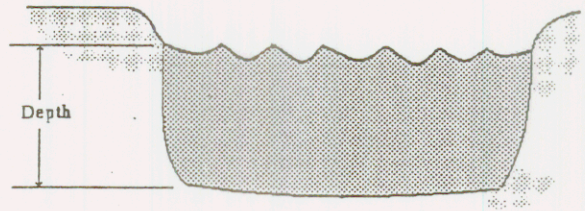
3. DETERMINING RESERVOIR CAPACITY

A. V shaped reservoirs, lakes, and ponds.

$$\text{Capacity} = \text{Surface Area} \times \text{Maximum Depth} \times 0.4$$

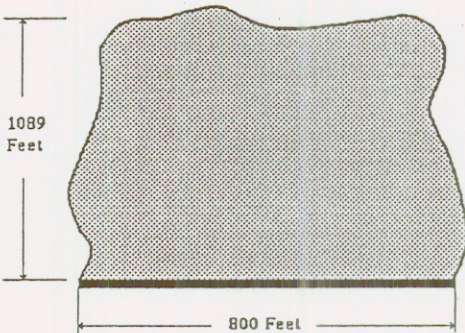


B. Flat Bottom reservoirs, lakes, and ponds.



$$\text{Capacity} = \text{Surface Area} \times \text{Maximum Depth}$$

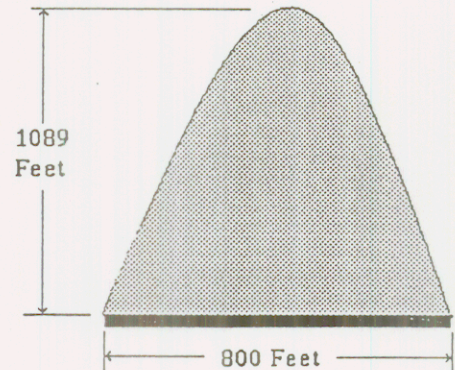
EXAMPLES:



1. Smith Creek Pond is 800' wide, 1089' long and 9' deep.

$$\begin{aligned} \text{Surface Area} &= \frac{800' \times 1089'}{43,560} \\ &= 20 \text{ acres} \end{aligned}$$

$$\begin{aligned} \text{Capacity} &= 20 \text{ acres} \times 9 \text{ feet} \\ &= 180 \text{ acre feet} \end{aligned}$$



1. Trout Creek Reservoir is 800' wide, 1089' long and 9' deep.

$$\begin{aligned} \text{Surface Area} &= \frac{1/2(800') \times 1089'}{43,560} \\ &= 10 \text{ acres} \end{aligned}$$

$$\begin{aligned} \text{Capacity} &= 10 \text{ acres} \times 9 \times 0.4 \text{ feet} \\ &= 36 \text{ acre feet} \end{aligned}$$